

Message Text

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ACTION ARA-14

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TO SECSTATE WASHDC 8897

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SUBJECT: REVISED BRAZILIAN NATIONAL ENERGY BALANCE

REF: BRASILIA 5148

1. 1978 UPDATE OF MINISTRY OF MINES AND ENERGY DOCUMENT "NATIONAL ENERGY BALANCE" JUST RELEASED IN PORTUGUESE. (COMMENT. ENGLISH VERSION EXPECTED TO BE AVAILABLE IN FEW WEEKS - WHEN OBTAINED COPIES WILL BE POUCHED TO WASHINGTON FOR STATE BRAZIL DESK, STATE/OES/NET, AND DOE/IA. END COMMENT.) FOLLOWING IS SUMMARY OF MOST IMPORTANT REVISED PROJECTIONS FOR NEXT DECADE (TO END OF)978), WITH MOST ENERGY SOURCES EXPRESSED AS TONS OF PETROLEUM EQUIVALENT (TPE) TO FACILITATE INTERCOMPARISON. (FYI. EMBASSY VIEWS ON BRAZILIAN CURRENT ENERGY SITUATION ARE GIVEN IN ECONOMIC TRENDES REPORT OF SEPTEMBER, 1968. END FYI).

2. BASIC ASSUMPTIONS FOR REVISED PROJECTIONS ARE AVERAGE POPULATION GROWTH OF W.5 PERCENT PER YEAR AND AVERAGE GNP GROWTH OF 7 PERCENT PER YEAR DURING DECADE. THESE LEAD TO)987 PRIMARY ENERGY CONSUMPTION FIGURE OF 188 MILLION TPE (1.28 TPE PER CAPITA-YEAR), OF WHICH 40.5 PERCENT IS ELECTRICAL ENERGY (1,790 UNCLASSIFIED

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HWH PER CAPITA-YEAR).

A. BRAZILIAN ENERGY RESERVES AS OF DEC. 31,1977:

PETROLEUM - 150 MILLION TPE

NATURAL GAS - 36 MILLION TPE

BIL FROM SHALE - 150 BILLION TPE (ESTIMATED)

6 BILLION TPE (PROVEN)

COAL - 80 BILLION TPE

HYDROPOWER - 280 MILLION TPE AVERAGE PER YEAR
(204 GW INSTALLED CAPACITY AT 54 PERCENT AVERAGE
UTILIZATION OR 110GW EFFECTIVE CAPACITY).
URANIUM - 66,800 TONS AS U308 (RECENT DISCOVERIES)
IN CEARA STATE ARE EXPECTED TO RAISE THIS FIGURE TO OVER
100,000 TONS SHORTLY.)

B. SOURCES OF PRIMARY ENERGY IN 1987:

PETROLEUM - 34.2 PERCENT
NATURAL GAS - 0.7 PERCENT
ETHYL ALCOHOL - 2.1 PERCENT
OIL FROM SHALE - 1.2 PERCENT
HYDROPOWER - 34.8 PERCENT
COAL - 6.0 PERCENT
FIREWOOD - 10.0 PERCENT
SUGAR CANE WASTE - 4.9 PERCENT
VEGETABLE CHARCOAL - 1.9 PERCENT
NUCLEAR POWER - 4.2 PERCENT
(TOTAL SOLAR - 53.7 PERCENT)

C. EXTERNAL DEPENDENCE PROJECTION:

PETROLEUM - DEPENDENCE VARIES FROM ZERO TO
90 PERCENT IN 1987, DEPENDING ON ESTIMATES OF BRAZILIAN
DISCOVERIES AND PRODUCTION
COAL - IMPORTATION IS EXPECTED TO DOUBLE (TO
7.4 MILLION TPE) DURING DECADE, UNLESS NEW TECHNOLOGIES ALLOW
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GRATER PRODUCTION AND UTILIZATION OF BRAZILIAN COAL.
URANIUM - NATURAL URANIUM IMPORTS WILL CEASE
BY 1948 AND REMAIN ZERO FOR REST OF DECADE.

D. ELECTRICITY IN 1987:

PRODUCTION BY HYDRO - 65.5 MILLION TPE (86 PERCENT)
BY COAL - 3.1 MILLION TPE (4 PERCENT)
BY NUCLEAR - 7.8 MILLION TPE (10 PERCENT)
INSTALLED CAPACITY OF HYDRO -48.5 GW (84 PERCENT)
OF COAL - 4.9 GW (8.5 PERCENT)
OF NUCLEAR - 4.36 GW (7.5 PERCENT)
(NUCLEAR PLANT OPERATING DATES ARE: AGRA I, 11/15/79;
ANGRA II, 5/31/84; ANGRA III, 11/30/85; AND UNIT IV, 12/31/86).

E. TRANSPORT FUEL: BY 1982, PRODUCTION OF ETHYL ALCHOOL
FROM BIOMASS (SUGAR CANE, MANIOC, ETC) IS EXPECTED TO
EXCEED THAT NEEDED TO SUPPLY GASAHOL (20 PERCENT ETHANOL/
80 PERCENT GASOLINE) TO ENTIRE COUNTRY. EXCESS WILL BE USED
IN DIESAHOL,(CHEMICAL INDUSTRY, AND VEHICLES WITH ALCOHOL
MOTORS. MINISTRY OF INDUSTRY AND COMMERCE HAS CALLED ON
BRAZILIAN AUTO/TRUCK INDUSTRY TO PRODUCE ONE VEHICLE OUT
OF EVERY SIX WITH ALCOHOL MOTORS IN 1983 AND INCREASE IN

SUBSEQUENT MODELS.

F. OIL FROM SHALE: PRODUCTION IS EXPECTED TO REACH
2.3 MILLION TPE ANNUALLY BY 1987
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